

**REMARKS**

This application has been carefully considered in connection with the Examiner's Office Action dated April 28, 2009. Reconsideration and allowance are respectfully requested in view of the following.

**Summary of Rejections**

Claims 1-15 and 20-33 were pending at the time of the Office Action.

Claims 1-15 were rejected under 35 USC § 112.

Claims 1-15 were rejected under 35 USC § 101.

Claims 20-21, 23, 25, and 27-33 were rejected under 35 USC § 102.

Claims 1-15, 22, 24, and 26 were rejected under 35 USC § 103.

**Status of the Claims**

Claims 1, 4, 8, 9, 11-15, and 20-33 are currently amended.

Claims 2, 3, 5-7, and 10 are cancelled herein.

Claims 16-19 and 34 were previously cancelled.

Claims 35-38 are new.

Remarks and Arguments are provided below.

**Summary of Claims Pending**

Claims 1, 4, 8, 9, 11-15, 20-33, and 35-38 are currently pending following this response.

**Applicant Initiated Interview**

Applicants thank Examiners Adrian J. McPhillip and Beth Boswell for their time and consideration of the arguments presented in the telephone interview on July 14, 2009. In the interview, Examiners McPhillip and Boswell further considered the applied art in view of the Applicants' arguments. Examiners McPhillip and Boswell indicated that a further search may be performed. A detailed discussion of the differences between the applied art and the claim limitations follows.

**Response to Rejections**

The pending application discloses that many customer-oriented enterprises rely on largely automated procedures for receiving, entering, and completing a customer order. Tracking and reporting data ensures that orders are not accumulating at any one step without any forward progress through the workflow. Identifying bottlenecks in the business process that block forward progress of other orders is important to recognizing workflow areas that need increased headcount or computing capacity.

An enterprise may depend upon a multitude of computer programs or applications which execute on several different computer systems to process orders. Collecting real-time data as well as historical data related to the orders may be complicated by the existence of the data on multiple systems with differing architectures. For example, the applications may be developed using different programming languages and at different times and the computer systems may be from different manufacturers and may employ different operating systems.

Accordingly, the pending application provides a business activity monitoring system and method which provides near real-time access to business performance indicators for

a diverse audience. The disclosed business activity monitoring system includes a plurality of log adapters that each corresponds with different log files generated by the systems and applications that process the orders. Each of the log adapters parses the corresponding log file entries of the applications and systems to extract needed information, and stores this needed information for processing by the business activity monitoring system. Therefore the disclosed business activity monitoring system is able to collect and process needed information for performing order tracking and reporting, even when the systems and applications that process the order have differing architectures.

Regarding the applied art, the Office Action relied on the disclosure of Helmus, Davies, and Wacławsky. However, none of the applied art provides any teaching or suggestion of a plurality of log adapters that each extract information from a corresponding log file of the various systems and applications that process an order.

This distinction will be discussed in greater detail in the analysis of the pending claims that follows.

### **Response to Rejections under Section 112**

Claims 1-15 were rejected under 35 USC § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Specifically, the Office Action noted that the claims are directed to an apparatus, in particular a system, but recite various limitations that are directed to steps or actions. “For example, ‘a log adapter that communicates with the log file to obtain at least a portion of the application data.’” The Office Action

concluded that it is unclear from applicants' claim language whether applicants intend to claim a method or an apparatus. (Page 2)

Claims 1-15 are amended to recite system elements that are each stored in a memory and executable by a corresponding computer system or processor to perform the functionality recited in the claims. Applicant notes that MPEP § 2106(IV)(B) states, "Note that an apparatus claim with process steps is not classified as a "hybrid" claim; instead, it is simply an apparatus claim including functional limitations. See, e.g., *R.A.C.C. Indus. v. Stun-Tech, Inc.*, 178 F.3d 1309 (Fed. Cir. 1998) (unpublished)." Also, with specific reference to the requirements of 35 USC § 112, second paragraph in particular, Applicant notes that MPEP 2173.01 states, "Applicant may use functional language... or any style of expression or format of claim which makes clear the boundaries of the subject matter for which protection is sought." Accordingly, as amended herein, it is clear that claims 1-15 are directed to various system components that provide particular functionality. Applicants respectfully request the rejection to claims 1-15 under 35 USC § 112, second paragraph be withdrawn.

Further, as amended herein, the claimed system components of claims 1-15 are recited as software components stored on a memory. Applicants note that "if a machine is programmed in a certain new and unobvious way, it is physically different from the machine without that program; its memory elements are differently arranged." Bernhart, 417 F.2d at 1400 (CCPA 1969). Therefore, the claimed functionality of each of the software components also results in a structural difference of the memory on which the software components are stored. Applicants note MPEP §§ 2114 and 2173.05(g) for reference on the treatment and examination of functional limitations.

**Response to Rejections under Section 101**

Claims 1-15 were rejected under 35 USC § 101 because the Office Action alleges that the claimed invention is directed to non-statutory subject matter.

Specifically, the Office Action states, “Claims 1-15 are directed toward functional descriptive material, specifically: a system comprising applications, components, adapters and agents. The claims do not positively recite elements that necessarily constitute a system or apparatus, and further do not positively tie the method steps being performed to any specific structure or apparatus. Rather the claims could be directed to software.” (Page 3) As amended herein, each system element is recited to be stored on a computer readable storage medium, as opposed to a computer readable transmission medium such as a carrier wave, that when executed by a computer system or processor perform the functionality recited in the claims. MPEP 2106.01(I) states, “[A] claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program’s functionality to be realized, and is thus statutory. See *Lowry*, 32 F.3d at 1583-84, 32 USPQ2d at 1035. When a computer program is recited in conjunction with a physical structure, such as a computer memory, USPTO personnel should treat the claim as a product claim.” Accordingly, as amended herein, claims 1-15 are directed to statutory subject matter.

Claims 20-33 were rejected under 35 USC § 101 because the Office Action alleges that the claimed invention is directed to non-statutory subject matter. The Office

Action stated that the methods recited in the claims “are neither tied to a machine nor do they transform the underlying subject matter to a different state or thing.” (Page 3)

As amended herein, claim 20 recites various software components stored in a memory and executed. For example, claim 20 recites, “a first application stored in a first memory and executed by a first computer system.”

The CAFC held that a method claim that is tied to a particular machine is statutory under § 101. In re Bilski, 545 F.3d 943, 961 (Fed. Cir. 2008). The CCPA, whose opinions like those of the CAFC are binding on the Patent Office, held that a claimed method that was performed by a digital computer was statutory. Application of Bernhart, 417 F.2d 1395, 1398-1401 (CCPA 1969) (holding that the apparatus and method claims were directed to statutory subject matter). The Bernhart decision also states that a digital computer, programmed to perform a novel and unobvious function is, in fact, a new machine, or at least an improvement to an old machine, and thus statutory. Id. at 1400. Specifically, “if a machine is programmed in a certain new and unobvious way, it is physically different from the machine without that program; its memory elements are differently arranged.” Id. at 1400. The Federal Circuit referred to Bernhart favorably and held that a general purpose computer, or microprocessor, programmed to carry out an algorithm becomes a special purpose computer and thus a new machine. WMS Gaming, Inc. v. International Game Technology, 184 F.3d 1339, 1348 (Fed. Cir. 1999) (“A general purpose computer, or microprocessor, programmed to carry out an algorithm creates “a new machine, because a general purpose computer in effect becomes a special purpose computer once it is programmed to perform particular functions pursuant to instructions from program software.”). Accordingly, under the

binding precedent of Bernhart and WMS Gaming, a computer that is programmed to perform a novel and unobvious method is, by definition, a particular machine for purpose of the § 101 analysis under Bilski. See also Ex Parte Wang, 2008 WL 4448241,\*7, n.3 (Bd.Pat.App. & Interf. Sept. 30, 2008) (citing approvingly Application of Bernhart).

Accordingly, the claimed software components stored in memory are a particular machine per the Bilski and Bernhart decisions. Furthermore, claim 20 recites first and second computer systems, which are also particular machines.

Applicants respectfully submit that claims 20-33 are directed to statutory subject matter. Applicants respectfully request the rejection under 35 USC § 101 be withdrawn.

### **Response to Rejections under Section 102**

#### **Claim 20:**

Claim 20 was rejected under 35 USC § 102(b) as being anticipated by Helmus et al., U.S. Pub. No. 2003/0225595 A1 (“Helmus”)

I. Helmus does not anticipate a monitor component that aggregates data extracted by multiple log adapters to monitor order processing, wherein each log adapter extracts application data or resource data from a corresponding log file for each application that processes an order or each computer system that executes an application that processes an order.

Amended claim 20 recites:

writing, by the first application, first application data related to the first application processing the order to a first application log file;  
writing, by a first log agent . . . to a first resource log file first hardware information related to the first computer system whereon the first

application processes the order; . . .  
 writing, by the second application, second application data related to the second application processing the order to a second application log file;  
 writing, by a second log agent . . . to a second resource log file second hardware information related to the second computer system whereon the second application processes the order;  
 extracting, by a plurality of corresponding log adapters . . . at least a portion of the first application data, at least a portion of the second application data, at least a portion of the first hardware information, and at least a portion of the second hardware information; and  
 aggregating by a monitor component . . . the at least the portion of the first application data, the at least the portion of the second application data, the at least the portion of the first hardware information, and the at least the portion of the second hardware information to monitor order processing.

Applicants respectfully submit that no new matter has been introduced by the amendments to claim 20. Support may be found throughout the specification as originally filed, including paragraphs 37, 40, 42, 43, and 45, and herein cancelled claims 2, 3, 5-7, and 10.

In reference to the rejection of independent claim 20, the Office Action cites paragraphs 11, 60, 124, and 125, and claims 43-47 to allege that Helmus anticipates:

writing by the applications, application data related to the applications processing of the orders to one or more log files . . . writing to the one or more log files hardware information related to the computer systems whereon the applications process the orders . . . aggregating at least portions of the hardware information and application data to monitor the order processing. (Pages 5-6)

These cited sections of Helmus include:

**The Command and Control Processor 101 is in communication with each system processor** and provides an interface through which real time information regarding, for example, system queues, order location, system resources, and system production is displayed, managed and processed.. . . The Command and Control module can extract information on any single queue or groups of queues and perform manipulations on the extracted data through **standard database query tools** to produce



status reports on any single, or in combination, aspect of the system.  
(Paragraphs 60 and 124, emphasis added)

Helmus discloses a command and control processor that is in communication with each system processor to extract system information through standard database queries. In contrast, the claims recite teaching a plurality of log adapters that each corresponds with different log files generated by the systems and applications that process the orders. Claim 20 recites, “extracting, by a plurality of corresponding log adapters . . . at least a portion of the first application data, at least a portion of the second application data, at least a portion of the first hardware information, and at least a portion of the second hardware information.” Each of the log adapters parses the corresponding log file entries of the applications and systems to extract needed information, and stores this needed information for processing by the business activity monitoring system, even when the systems and applications that process the order have differing architectures. The pending disclosure teaches:

In reading the log file, each log adapter 22, 24, or 26 filters through all logs and finds those log file entries which speak to the performance of the application 12, 14, or 16, parses the selected log file entries to extract the needed information, and stores this needed information for processing by the BAM [Business Activity Monitoring tool] 20 . . . A host 1 log agent 30 executing on the first general purpose computer system 15 periodically looks up the system statistics of the first general purpose computer system 15 and logs them to a log file on the log file database 18. A host 2 log agent 32 executing on the second general purpose computer system 17 periodically looks up the system statistics of the second general purpose computer system 17 and logs them to a log file on the log file database 18. A fourth log adapter 34 reads the host 1 log agent 30 log file and a fifth log adapter 36 reads the host 2 log agent 32 log file. The fourth log adapter 34 and fifth log adapter 36 filter through all logs and finds those system logs which are pertinent, parses these logs to extract the needed information, and stores this information for processing by the BAM 20. (Paragraphs 43 and 45)

The present disclosure teaches a monitoring component that uses data from legacy system log files to monitor order processing without requiring the modification of legacy systems with differing architectures because the monitoring component uses corresponding log adapters that extract data from pre-existing legacy system log files.

In contrast to Helmus, which requires that the control processor is in communication with the system processors, the pending disclosure teaches that because the monitoring component uses information extracted from legacy log files that the legacy computer systems already write, no additional communication is required for any legacy computer system associated with the retrieved information. In contrast to Helmus, which teaches to extract system information through standard database queries, the pending disclosure teaches that each log adapter filters through all corresponding log files, finds those log file entries which speak to the performance of the corresponding application or system, parses the selected log file entries to extract the needed information, and stores this needed information for processing by the monitoring component. Whereas Helmus teaches the use of standard database queries, the pending disclosure teaches that each adapter is configured to filter, find, parse and extract data in a corresponding legacy log file, even if the legacy log files are not standard and correspond to multiple legacy systems with different architectures, as claimed in new claim 35.

Accordingly, Helmus does not anticipate a monitor component that aggregates data extracted by multiple log adapters to monitor order processing, wherein each log adapter extracts application data or resource data from a corresponding log file for each

application that processes an order or each computer system that executes an application that processes an order.

For at least the reasons established above in section I, Applicants respectfully submit that independent claim 20 is not anticipated by Helmus, and respectfully requests allowance of this claim.

**Claims Depending from Claim 20:**

Claims 21, 23, 25, and 27-33 were rejected under 35 USC § 102(b) as being anticipated by Helmus).

Dependent claims 21, 23, 25, and 27-33 depend directly or indirectly from independent claim 20 and incorporate all of the limitations thereof. Accordingly, for at least the reasons established in section I above, Applicants respectfully submit that claims 21, 23, 25, and 27-33 are not anticipated by Helmus and respectfully request allowance of these claims.

**Claim 36:**

II. Helmus does not anticipate displaying hardware statistics of a hardware component selected from an illustrated hardware architecture.

New claim 36 recites “graphically illustrating . . . a hardware architecture of the computer system used by the application to process portions of the order; selecting . . . a hardware component of the illustrated hardware architecture; and displaying . . . hardware statistics of the selected hardware component.”

Applicants respectfully submit that no new matter has been introduced by new claim 36, which includes limitations similar to those previously presented in dependent

claim 25. Support may be found throughout the specification as originally filed, including independent claim 20, dependent claim 25, and paragraph 55.

In reference to the rejection of dependent claim 25, the Office Action cites paragraph 124 and Figure 18 to allege that Helmus anticipates. “graphically illustrating an architecture of the computer system used by the applications to process portions of the orders . . . selecting a component of the illustrated architecture of the computer system . . . displaying hardware statistics of the selected component of the computer system.” (Pages 6-7)

As discussed above, these sections of Helmus disclose a command and control processor that is in communication with each system processor to extract system information through standard database queries. According to paragraph 124, Figure 17 of Helmus depicts “a schematic of information visibility to the Command and Control module,” but does not mention hardware components or hardware statistics. Figure 17 specifically depicts work queues and user queues. According to paragraph 125, Figure 18 of Helmus depicts “an example of an instrument panel that is part of the user interface of the Command and Control module,” but does not mention hardware components or hardware statistics. Figure 18 specifically depicts gauges of an instrument panel that indicate the quantitative loads in each selected queue present in the instrument panel. In contrast to depicting queues, the pending disclosure’s graphic user interface depicts a hardware architecture which includes hardware components that may be selected to display hardware statistics of the selected hardware components.

Accordingly, Helmus does not anticipate displaying hardware statistics of a hardware component selected from an illustrated hardware architecture.

**Claims Depending from Claim 36:**

Dependent claims 37 and 38 depend directly from independent claim 36 and incorporate all of the limitations thereof. Accordingly, for at least the reasons established in section II above, Applicants respectfully submit that claims 37 and 38 are not anticipated by Helmus and respectfully request allowance of these claims.

**Response to Rejections under Section 103****Claim 1:**

Claim 1 was rejected under 35 USC § 103(a) as being unpatentable over Davies et al., U.S. Pub. No. 2003/0033191 A1 (“Davies”) in view of Waclawsky et al., U.S. patent 6,850,530 B1 (“Waclawsky”)

III. Davies in view of Waclawsky does not teach or suggest a monitor component that communicates with multiple log adapters, wherein each log adapter extracts application data or resource data from a corresponding log file for each application that processes an order or each computer system that executes an application that processes an order, and determines information related to an order using the extracted data.

Amended claim 1 recites:

a first application . . . to process a portion of a first event related to an order and write first application data to a first application log file, the first application data related to the processing of the first event by the first application;

- a second application . . . to process a portion of a second event related to the order and write second application data to a second application log file, the second application data related to the processing of the second event by the second application;
- a first log agent . . . to monitor a first resource data related to the first computer system used by the first application to process at least some of the first event and write the first resource data to a first resource log file;
- a second log agent . . . to monitor a second resource data related to the second computer system used by the second application to process at least some of the second event and write the second resource data to a second resource log file;
- a plurality of log adapters, each . . . to communicate with a corresponding one of the first application log file, the second application log file, the first resource log file, and the second resource log file to extract at least a portion of at least one of the first application data, the second application data, the first resource data, and the second resource data; and
- a monitor component . . . to communicate with the first log adapter, the second log adapter, the third log adapter, and the fourth log adapter, and determine event status information related to the order using the at least the portion of the first application data, the at least the portion of the second application data, the at least the portion of the first resource data, and the at least the portion of the second resource data.

Applicants respectfully submit that no new matter has been introduced by the amendments to claim 1. Support may be found throughout the specification as originally filed, including paragraphs 37, 40, 42, 43, and 45, and herein cancelled claims 2, 3, 5-7, and 10.

In reference to the rejection of independent claim 1, the Office Action cites paragraphs 20 and 38 of Davies and columns 3-6 of Waclawsky to allege that Davies in view of Waclawsky teaches or suggests:

An application that processes a portion of an event and writes application data to a log file, the application data related to the processing of the event by the application . . . a log adapter that communicates with the log file to obtain at least a portion of the application data . . . a monitor component in communication with the log adapter that obtains the portion of the application data, the monitor component determines event status

information using the obtained application data . . . a system for monitoring resource data related to a computer system (Pages 10-11)

These cited sections of Davies include:

According to specific embodiments of the present invention, business objects have states that characterize status (e.g. Pending, Planning, Active, Complete, Inactive, and Canceled). Objects are created in a state and can transition between states based on business rules . . . According to specific embodiments, the present invention provides reporting of information for certain business objects . . . According to specific embodiments, the present invention compares real-time forecast data to plan data, thereby generate a proactive notification that warns of potential cost overruns or delays. (Paragraphs 20 and 38)

Davies discloses using state transitions for created business objects to compare real-time forecast data to plan data, thereby generating a proactive notification that warns of potential cost overruns or delays.

The cited sections of Waclawsky include:

The system includes a source computer which provides a data element (e.g., a packet, frame, cell, message, etc.), and a network node coupled to the source computer. The network node forms at least a portion of a network with the source computer. The network node is configured to receive the data element from the source computer, determine that the data element is stale based on a parameter within the data element, remove the data element from the network and send a signal to the source computer. The signal (e.g., a modified ICMP error message) includes (i) an indication that the network node has removed the data element from the network, and (ii) resource usage information describing usage of resources within the network node. (Column 3, lines 14-26)

Waclawsky discloses a network node that receives a data element from a source computer and sends a signal containing resource usage information to the source computer if the data element is stale.

In contrast, as discussed above in section I, the pending disclosure teaches a plurality of log adapters that each corresponds with different log files generated by the systems and applications that process the orders. Claim 1 recites:

a plurality of log adapters, each . . . to communicate with a corresponding one of the first application log file, the second application log file, the first resource log file, and the second resource log file to extract at least a portion of at least one of the first application data, the second application data, the first resource data, and the second resource data.

Each of the log adapters parses the corresponding log file entries of the applications and systems to extract needed information, and stores this needed information for processing by the business activity monitoring system, even when the systems and applications that process the order have differing architectures.

In contrast to Waclawsky, which requires that the network node that supplies the resource information is in communication with the source computer, the pending disclosure teaches that because the monitoring component uses information extracted from legacy log files that the legacy computer systems already write, no additional communication is required for any legacy computer system associated with the retrieved information. In contrast to Davies, which requires that the forecast data and the plan data are each stored in objects created by the system to reflect the states of objects, the pending disclosure teaches that the monitoring component uses information extracted from legacy log files that the legacy computer systems already writes. In contrast to Davies, which teaches “the invention also imposes some unifying structure to all Business Objects,” (paragraph 15) the pending disclosure teaches that each log adapter filters through all corresponding log files, finds those log file entries which speak to the performance of the corresponding application, parses the selected log file entries to extract the needed information, and stores this needed information for processing by the monitoring component. Whereas Davies teaches a unifying structure for all objects, the pending disclosure teaches that each adapter is configured to filter, find, parse and



extract data in a corresponding legacy log file, even if the legacy log files do not share a unified structure and correspond to multiple legacy systems with different architectures.

Accordingly, Davies in view of Waclawsky does not teach or suggest a monitor component that communicates with multiple log adapters, wherein each log adapter extracts application data or resource data from a corresponding log file for each application that processes an order or each computer system that executes an application that processes an order, and determines information related to an order using the extracted data.

For at least the reasons established above in section III, Applicants respectfully submit that independent claim 1 is not taught or suggested by Davies in view of Waclawsky and respectfully requests allowance of this claim.

**Claims Depending from Claim 1:**

Claims 2-15 were rejected under 35 USC § 103(a) as being unpatentable over Davies in view of Waclawsky.

Dependent claims 2-3, 5-7, and 10 are canceled herein. Dependent claims 4, 8, 9, and 11-15 and new claim 35 depend directly or indirectly from independent claim 1 and incorporate all of the limitations thereof. Applicants respectfully submit that no new matter has been introduced by new claim 35. Support may be found throughout the specification as originally filed, including paragraph 37. Accordingly, for at least the reasons established in section III above, Applicants respectfully submit that claims 4, 8, 9, 11-15, and 35 are not taught or suggested by Davies in view of Waclawsky and respectfully request allowance of these claims.

**Claims Depending from Claim 20:**

Claims 22, 24, and 26 were rejected under 35 USC § 103(a) as being unpatentable over Helmus.

Dependent claims 22, 24, and 26 depend directly or indirectly from independent claim 20 and incorporate all of the limitations thereof. Accordingly, for at least the reasons established in section I above, Applicants respectfully submit that claims 22, 24, and 26 are not taught or suggested by Helmus and respectfully request allowance of these claims.

**Conclusion**

Applicants respectfully submit that the present application is in condition for allowance for the reasons stated above. If the Examiner has any questions or comments or otherwise feels it would be helpful in expediting the application, he is encouraged to telephone the undersigned at (972) 731-2288.

The Commissioner is hereby authorized to charge payment of any further fees associated with any of the foregoing papers submitted herewith, or to credit any overpayment thereof, to Deposit Account No. 21-0765, Sprint.

Respectfully submitted,

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